

Amendments to the Claims

1.(currently amended) A method of using electromagnetic radiation to sense the speed of an optical disk having a tracked data side on which data may be stored and an untracked non-data side that includes a pattern of reflective and non-reflective regions or a pattern of magnetic and non-magnetic regions aligned circularly about the disk, the pattern being positioned on an inner rim or on an outer rim of the disk, or both, outside a label area in which images may be formed on the non-data side of the disk, the method comprising:

rotating the disk;

sensing, with a stationary detector, a frequency of electromagnetic radiation radiating from the pattern on the rotating disk;

determining from the sensed frequency a rotational speed of the disk; and

controlling, with the sensed frequency, a rotational speed of the disk.

2.(canceled)

3.(previously presented) The method of claim 1 wherein the pattern comprises a spoke pattern.

4.(previously presented) The method of claim 1 wherein the pattern comprises a gear-tooth pattern.

5-12.(canceled)

13.(currently amended) A device for interacting with an optical disk having a tracked data side on which data may be stored and an untracked non-data side that includes a pattern of reflective and non-reflective regions aligned circularly about a rim of the disk outside a label area in which images may be formed on the non-data side of the disk, the device comprising;

a rotation device configured to rotate the disk;

an electromagnetic radiation source directed at the rim, wherein electromagnetic radiation radiated from the reflective regions of the pattern originates from the electromagnetic radiation source directed at the rim;

an electromagnetic radiation sensor configured to sense a frequency of electromagnetic radiation radiated from the reflective regions of the pattern; and

a controller coupled to the electromagnetic radiation sensor, the controller configured to, with a sensed frequency of electromagnetic radiation radiated from the reflective regions of the pattern, control a rotational speed of the disk and establish an absolute reference for radial positioning over the label area on the untracked non-data side of the disk.

14.(canceled)

15.(previously presented) The device of claim 13 wherein the sensor is disposed to sense electromagnetic radiation reflected from a spoke pattern on the disk.

16.(previously presented) The device of claim 13 wherein the sensor is disposed to sense electromagnetic radiation reflected from a gear-tooth pattern on the disk.

17.(previously presented) The device of claim 13 the electromagnetic radiation source includes a coherent electromagnetic radiation source.

18.(previously presented) The device of claim 13 the electromagnetic radiation source includes a non-coherent electromagnetic radiation source.

19.(previously presented) The device of claim 13 wherein the rotation device includes:

a spindle coupled to the disk when the disk is installed in the device; and
a motor coupled to the spindle.

20.(previously presented) The device of claim 19 wherein the controller includes a motor controller configured to control the motor.

21.(previously presented) The device of claim 13 wherein the rim comprises an inner rim or on an outer rim, or both, outside a label area on the non-data side of the disk.

22-24.(canceled)

25.(previously presented) The device of claim 13 wherein the controller includes a radial positioner for controlling a placement of a beam of the electromagnetic radiation on the disk.

26.(currently amended) A mass storage device having media that is rotateable, comprising;

means for sensing electromagnetic radiation with a stationary sensor from a pattern of reflective and non-reflective or magnetic and non-magnetic regions aligned circularly about a rim of a trackless non-data side of the media, the pattern being positioned on an inner rim or on an outer rim of the disk, or both, outside a label area in which images may be formed on the non-data side of the disk;

means for controlling the rotational speed of the media based on the sensed electromagnetic radiation;

means for positioning radially over the label area an electromagnetic source with respect to a surface of the trackless non-data side of media based on the sensed electromagnetic radiation; and

means for controlling exposure of the media by the electromagnetic source in conjunction with the means for controlling and the means for positioning.

27.(previously presented) The mass storage device of claim 26 wherein the pattern includes a pattern of reflective and non-reflective regions aligned circularly about a rim of the media and the mass storage device further including means for sourcing electromagnetic radiation directed at the rim, wherein the electromagnetic

radiation radiated from the reflective regions of the pattern originated from the electromagnetic radiation source directed at the rim.

28.(original) The mass storage device of claim 27 wherein the means for sensing is disposed to sense electromagnetic radiation from a spoke pattern on the media.

29.(original) The mass storage device of claim 27 wherein the means for sensing is disposed to sense electromagnetic radiation from a gear-tooth pattern on the media.

30.(previously presented) The mass storage device of claim 27 wherein the means for sourcing electromagnetic radiation includes a coherent electromagnetic radiation source.

31.(previously presented) The mass storage device of claim 27 wherein the means for sourcing electromagnetic radiation includes a non-coherent electromagnetic radiation source.

32.(previously presented) The mass storage device of claim 27 wherein the means for sourcing electromagnetic radiation includes a coherent electromagnetic radiation emitter.

33.(previously presented) The mass storage device of claim 27 wherein the means for sourcing electromagnetic radiation includes a non-coherent electromagnetic radiation emitter.

34.(original) The mass storage device of claim 26 wherein the means for controlling the rotational speed includes:
a spindle coupled to the media and
a motor coupled to the spindle.

35.(previously presented) The mass storage device of claim 34 wherein the means for controlling rotational speed includes a motor controller configured to control the rotational speed of the media to 0.25 meters/second at an accuracy of 0.02 percent.

36-37.(canceled)

38.(original) The mass storage device of claim 26 wherein the means for controlling includes placement means for controlling a placement of a beam of the electromagnetic radiation on the media.

39.(currently amended) A program storage system readable by a computer, tangibly embodying a program, applet, or instructions executable by the computer to perform method steps for using sensed electromagnetic radiation to sense the speed of an optical disk having a tracked data side on which data may be stored and an untracked non-data side that includes a pattern of reflective and non-reflective regions or a pattern of magnetic and non-magnetic regions aligned circularly about the disk, the pattern being positioned on an inner rim or on an outer rim of the disk, or both, outside a label area in which images may be formed on the non-data side of the disk, the method comprising:

rotating the disk;

sensing a frequency of electromagnetic radiation radiating from the reflective regions of the pattern or from the magnetic regions of the pattern;

controlling, with the sensed frequency, a rotational speed of the disk; and

establishing, with the sensed frequency, an absolute reference for radial positioning over the label area on the untracked non-data side of the disk.

40.(previously presented) The program storage system of claim 39, further comprising determining from the sensed frequency a rotational speed of the disk.

41-44.(canceled)

45.(previously presented) The program storage system of claim 39 wherein controlling a rotational speed of the disk includes controlling the rotational speed of a spindle onto which the disk is fixed.

46.(previously presented) The program storage system of claim 39 wherein controlling a rotational speed of the disk includes controlling the rotational accuracy of a spindle onto which the disk is fixed to allow placement to within a quarter of a pixel at 600 dpi on the disk.

47-50.(canceled)

51.(currently amended) A method, comprising:

sensing a reference pattern on a trackless non-data side of an optical disk, the pattern being positioned on an inner rim or on an outer rim of the disk, or both, outside a label area in which images may be formed on the non-data side of the disk;

based on the sensing, establishing an absolute radial location as a reference for radial positioning over the label area on the non-data side of the disk; and

based on the sensing, controlling a rotational speed of the disk.

52.(currently amended) The method of Claim 51, wherein sensing the reference pattern comprises scanning the reference pattern with a first light and detecting light reflected from the pattern and the method further comprises, based on the establishing, positioning a second light radially over the label area on the disk.